Docket No.: R&K-6090

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Before the Board of Patent Appeals and Interferences

Applic. No.	:	10/551,851	Confirmation No.: 6187
Inventor	:	Klaus Rock, et al.	
Filed	:	November 14, 2005	
Title	:	Method for Reducing the Latency Time for Interactive Data Communication Between a Server Computer and a Client Computer via a Geostationary Satellite Network	
TC/A.U.	:	2451	
Examiner	:	Karen C. Tang	
Customer No.	:	24131	

Hon. Commissioner for Patents
Alexandria, VA 22313-1450

BRIEF ON APPEAL

S i r :

This is an appeal from the final rejection in the Office action dated October 5, 2009, finally rejecting claims 22 and 24-42.

Appellants submit this *Brief on Appeal* including payment in the amount of $270.00 to cover the fee for filing the *Brief on Appeal*.

Real Party in Interest:

This application is assigned to Rock Technologies Limited of Hamilton, Bermuda. The assignment will be submitted for recordation upon the termination of this appeal.

Related Appeals and Interferences:

No related appeals or interference proceedings are currently pending which would directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

Status of Claims:

Claims 22 and 24-42 are rejected and are under appeal. Claims 1-21 were cancelled in an amendment dated October 3, 2005. Claim 23 was cancelled in an amendment dated September 19, 2007.

Status of Amendments:

No claims were amended after the final Office action. *A Response under 37 CFR § 1.116* was filed on June 29, 2009. The Primary Examiner stated in an *Advisory Action* dated July 16, 2009 that the request for reconsideration had been considered but did not place the application in condition for allowance.

Summary of the Claimed Subject Matter:

The subject matter of each independent claim is described in the specification of the instant application. Examples explaining the subject matter defined in each of the independent claims, referring to the specification by page and line numbers, and to the drawings, are given below. The line numbers are indicated by counting down from the first written line on the page while ignoring any line numbers indicated at the left margin.

Independent claim 22 reads as follows:

22. A method for reducing the latency time [page 13, line 9] for interactive data communication between a server computer [page 11, line 20; 6, Fig. 1] and a client computer [page 11, line 14; 2, Fig. 1] via a telecommunication network [page 11, line 14; 4 Fig. 1], in particular via a satellite network [page 11, line 14; 4 Fig. 1] comprising a geostationary satellite [page 11, line 17; 12 Fig. 1], wherein a data processing application [page 11, line 20; 14, Fig. 1], in particular a database application [page 12, lines 2-5], runs on the server [page 11, line 20; 6, Fig. 1] and generates screen displays [page 12, line 23] of an interactive user application [page 12, lines 26-27] with several data

fields [page 12, line 11; 18 Fig. 1] that are processed one after the other in a processing sequence [page 12, line 12] in line with predetermined parameters [page 12, lines 11-12] based on commands [page 13, line 1] and data [page 13, line 1] entered via an input medium [page 12, line 28; 30 Fig. 1] connected to the client computer [page 11, line 14; 2, Fig. 1] and are then transferred to the client computer [page 11, line 14; 2, Fig. 1] in the form of data packets [page 13, line 2] without acknowledgment of receipt [page 12, line 25] and displayed by this client computer [page 11, line 14; 2, Fig. 1] on a display medium [page 12, line 26; 26 Fig. 1], whereby on the display medium [page 12, line 26; 26 Fig. 1] a command prompt [page 13, line 17; 7 Fig. 1] signalizes that additional data [page 13, line 1] is to be entered in a corresponding data field [page 12, line 11; 18 Fig. 1] via the input medium [page 12, line 28; 30 Fig. 1], and then transmitted [page 13, line 5] in the form of additional data packets [page 13, line 2] via the telecommunication network [page 11, line 14; 4 Fig. 1] to the server computer [page 11, line 20; 6, Fig. 1], wherein the parameters [page 12, lines 11-12] for the processing sequence [page 12, line 12] of the data fields [page 12, line 11; 18 Fig. 1] are transferred via the telecommunication network [page 11, line 14; 4 Fig. 1] to the client computer [page 11, line 14; 2, Fig. 1], and an independent program

routine [page 12, line 14; 22 Fig. 1] runs on the client computer [page 11, line 14; 2, Fig. 1] which alters the screen display [page 12, line 23] independently in such a way when entering specified commands [page 13, line 1] via the input medium [page 12, line 28; 30 Fig. 1] based on the parameters [page 12, lines 11- 12] for the processing sequence [page 12, line 12] that the input prompt [page 13, line 17; 7 Fig. 1] within a data field [page 12, line 11; 18 Fig. 1] is moved to the next or previous data field [page 12, line 11; 18 Fig. 1] in line with the processing sequence [page 12, line 12], wherein the server computer [page 11, line 20; 6, Fig. 1] is operated using a window-based operating system [page 12, lines 5-7], whereby the screen displays [page 12, line 23] transmitted to the client computer [page 11, line 14; 2, Fig. 1] are generated on the server computer [page 11, line 20; 6, Fig. 1] using a window program routine [page 12, line 8] of the operating system [page 12, lines 5-7] on the server computer [page 11, line 20; 6, Fig. 1] based on window and object parameters [page 12, lines 8-9] prior to being sent to the client computer [page 11, line 14; 2, Fig. 1], and wherein the window and object parameters [page 12, lines 8-9] include X and Y coordinates [page 14, line 24] of objects [page 14, line 24] being displayed.

Grounds of Rejection to be Reviewed on Appeal

1. Whether or not claims 22, 24-35 and 37 are obvious over US patent No. 6,920,505 to Hals et al., US patent No. 6,966,029 to Ahern and US patent No. 7,194,683 to Hind et al. under 35 U.S.C. § 103.

2. Whether or not claims 36, 38, 39, 40, 41 and 42 are obvious over US patent No. 6,920,505 to Hals et al., US patent No. 6,966,029 to Ahern, US patent No. 7,194,683 to Hind et al., and US patent application publication No. 2002/0165993 to Kramer under 35 U.S.C. § 103.

Argument:

Claims 22, 24-35 and 37 are not obvious over Hals et al., Ahern and Hind et al. under 35 U.S.C. § 103

First, appellants respectfully believe that the Examiner has not put forth any legitimate reason as to why one of ordinary skill in the art would have made the modifications that have been put forth by the Examiner

and that therefore the Examiner has failed to properly support the rejection.

The Examiner has stated, "Hence, providing the features disclosed by Ahern, would be desirable for a user to implement because Hals indicates there are numerous modification and change may be made to the system without departing from the teaching of Hals" (See page 5, lines 3-5 of the Office action). Almost identically, the Examiner has also stated, "Hence, providing the features disclosed by Hind, would be desirable for a user to implement because Hals indicates there are numerous modification and change may be made to the system without departing from the teaching of Hals" (See page 5, lines 13-15 of the Office action).

The Examiner is, in effect, asserting that simply because changes are possible, it would have been obvious to incorporate any possible changes that the Examiner needs to rely on in order to reconstruct the claimed invention. The mere fact that changes are possible does not provide any motivation to actually make the changes. Appellants believe the Examiner has not given any legitimate reason as to why

such changes would have been made and that the rejection has not been properly supported. Appellants respectfully request that the rejection be overturned for this reason alone.

Appellants will now discuss the invention and the prior art. Appellants believe that in order to fully understand and appreciate the claimed invention, one must appreciate the difference between "server-based computing", which is the basis of the claimed invention, and "HTML-based transfer techniques" that are used for transferring web sites in the Internet. Appellants will therefore first review the difference between server based computing and HTML-based transfer techniques.

I Server-based computing:

The most essential difference between HTML technology and server-based computing is that, in server-based computing, an interactive application, such as for example, a database application, runs entirely self-sufficiently on the server computer designated hereinafter as "application server".

In this case, an interactive application program, for example, a database application runs entirely self-sufficiently on the application server, wherein the latter, figuratively expressed, lets the interactive application run in its own window, which is assigned to each client computer connected to the application server.

It is important in this case that the interactive application is executed independently on the application server, and the screen displays, computed by the application server, of the interactive application program, for example, a database input mask, in which various fields must be filled out, is also computed on the application server. This display is then transferred via a highly latent connection, for example a geostationary satellite connection, onto the client computer, which, contrary to a database application or a text processing application, such as Word, does not execute the application per se, but merely reproduces the screen displays computed by the application server via the respective graphic card on the screen. In this case, the client computer merely functions as a “dumb” terminal, whereas the application server executes the actual computing work, such as, for example, the sorting and converting of large data amounts into the

database, which, naturally, occurs with a clearly higher speed than could be executed by a simple client computer.

In order to react to an input mask computed by the application server and transferred to the client as a screen display by inputting letters or numbers, an independent program routine takes place on the client computer as specified in claim 22 as well as in the dependent claims. Expressed in simple terms, this independent program routine merely computes the movement of the cursor in the mask illustrated on the screen of the client computer and ensures that, for example, after the input of letters and a final command the latter are sent back in the form of further data packets to the application server. The latter, by means of the input commands and the newly entered data, executes, for example, a new sorting of the database.

In other words, by sending only a few letters of text and corresponding control commands, such as for example, an input command, the application server receives instructions with a certain delay via the highly latent connection. By means of these instructions, the application server computes a new screen display via the interactive application program, which screen is subsequently sent again to the

client PC. The connection between the client computer and the application server is always maintained in this case, since the application program is, so to speak, remotely controlled on the application server via the client PC and the highly latent network connection.

II HTML-Technology:

Contrary to the situation in server based computing, with HTML technology that is known from the Internet, a web server is accessed via the web browser installed on the client computer and via a network connection by inputting a desired Internet address, for example, the page of an airline company, where a flight is to be booked. A plurality of preset HTML pages generated beforehand is deposited on the web server. The web server can also be connected with the database server, which manages the individual flight data, for example.

After selecting the corresponding web page, where, for example, the desired flights are listed, the web server sends back the page contents in form of HTML code. It is also possible for, further independent

program routines like Java scripts or the like to also be contained therein, for example.

The source code that is sent to the client computer via the network connection is not subsequently interpreted by the client computer, but rather it is subsequently interpreted by the browser that runs on the client computer. The source code is then converted into a screen display that indicates the requested web page to the user. Even fields in the HTML illustration can admittedly be generated from the Java scripts or Applets. These fields, without more detailed knowledge of the display technology, create the impression for the layman as if an interactive application, for example, a flight booking system completely runs on the server and only the displays on the client PCT are computed.

The reality is that the connection between the client computer and the web server is interrupted after sending the entire HTML page. After the input of data into a data field of the displayed browser mask and clicking or inputting the “enter” command, this input mask is then interpreted by the browser, which means that the browser of the respective selection assigns a corresponding URL address in the data

field, the former then being sent again to the web server. The web server then deposits the HTML code of the requested web page from its internal database and sends it in the above-described manner again to the client computer. The browser of client computer interprets it and displays it on the screen of the client computer. After that, the connection is again interrupted.

Appellants want to emphasize once more that, because of the system, HTML-based technology in reality does not make possible the operation of a pseudo-interactive application, such as for example, a flight booking system via a highly latent network. This is due to the fact that a latency period of, for example, 0.5 seconds by the return confirmations, which are absolutely required for the transfer of HTML code, requires several minutes for each side without further measures even if several thousand data packets are combined in merely one large TCP-IP data packet prior to the transfer. It is understood that, in practice, one cannot speak of an interactive application if the wait period is several minutes after each input.

With regard to the teachings in Hals et al., Ahern, and Hind et al., appellants note that they all pertain to the exchange of HTML pages so

that even in combination, they could not suggest the invention as defined by claim 22.

Appellants believe that one of ordinary skill in the art would not even consider the data processing technologies described in these references because they are exclusively based on the transfer of HTML code, which, as explained above, excludes operation suitable in practice due to the substantial delay.

Appellants will now briefly discuss the teachings in the cited references to emphasize that they do not relate to server based computing, but that rather they merely relate to HTML transfer techniques.

Hals et al. pertains to a method or a device used to provide a suitable navigation path for a visitor of a web page by considering a previously input direct or indirect search term or key word. Hals et al. create a new Web page with several links on one web page due to the transferred direct or indirect search terms or keys. It is intended to supplement the result pages that are usually created by search engines in order to have a more controlled access to the contents of a web page. For this purpose, additional web servers and database servers

are used. In this case, the database server stores visitor information and already generated detailed navigation paths and transmits them via the web server. The invention of Hals et al. supplements the result pages that have been typically generated by search engines to include expanded navigation paths and links, which are specifically generated on web pages by means of transferred search terms and key words. For this purpose, a database, a web server, a communication network, as well as a client computer system are required. The web pages that are created are typical HTML pages that have nothing to do with a window application performed on a server. Hals et al. pertains to refining previous search engine results.

Ahern pertains to the integration and encryption of scripts (programs such as Java, Java script, VB script etc.) in electronic documents, mainly in HTML pages. The scripts can then process and format contents (text), which is also incorporated into an HTML page. A parser, which is additionally incorporated into a web browser, detects the encrypted code by means of special tags and then decodes it. The code can then be executed by the script processor (interpreter), which is also integrated. The invention in Ahern pertains to a technique, which permits the incorporation and encryption of a code into HTML

pages. The code is then decoded in the browser and transferred to the script processor or interpreter. The code to be executed processes or formats the pages that are embedded into the HTML pages (render via CSS style sheets).

Hind et al. pertains to the integration of dynamic data (from external data, SQL database source, XML data etc.) into an HTML page. Instead of integrating texts directly into an HTML page, they are first read by external sources and are then formatted by means of HTML formatting commands (style sheets, XSLT etc.). Even embedded scripts can be activated (Java scripts, Java beans, etc.) in order to format the texts. Hind et al. pertains to a content management system that is customary nowadays (CMS), wherein dynamic text contents are read by external sources and then formatted via HTML formatting commands, style sheets CSS, XSLT processors, or so-called templates.

Since these three references all pertain to the exchange of HTML pages, appellants believe that one of ordinary skill in the art would not consider these references in connection with the acceleration of an

interactive application program on an application server, in which the program is executed via a highly latent network connection.

Claims 36, 38, 39, 40, 41 and 42 are not obvious over Hals et al., Ahern, Hind et al., and Kramer under 35 U.S.C. § 103

Even if there would have been a suggestion to combine the teaching in Kramer with that of Hals et al., Ahern and Hind et al., the invention as defined by claims 36, 38, 39, 40, 41 and 42 would not have been obtained for the reasons given above with regard to claim 22 and the teachings in Hals et al., Ahern and Hind et al.

Appellants also respectfully assert that the Examiner has not put forth any legitimate reason as to why one of ordinary skill in the art would have made the modifications that have been put forth by the Examiner and that therefore the Examiner has failed to properly support the rejection.

The Examiner has stated, "Hence, providing the features disclosed by Kramer, would be desirable for a user to implement because Hals indicates there are numerous modification and change may be made to the system without departing from the teaching of Hals" (See page 13, lines 10-12 of the Office action).

The Examiner is, in effect, asserting that simply because changes are possible, it would have been obvious to incorporate any possible changes that the Examiner needs to rely on in order to reconstruct the claimed invention. The mere fact that changes are possible does not provide any motivation to actually make the changes. Appellants believe the Examiner has not given any legitimate reason as to why such changes would have been made and that the rejection has not been properly supported. Appellants respectfully request that the rejection be overturned for this additional reason.

The honorable Board is therefore respectfully urged to reverse the final rejection of the Primary Examiner.

If an extension of time is required for this submission, petition for extension is herewith made. Any fees due should be charged to Deposit Account No. 12-1099 of Lerner Greenberg Stemer LLP.

Respectfully submitted,

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Date: November 5, 2009

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Claims Appendix:

22. A method for reducing the latency time for interactive data communication between a server computer and a client computer via a telecommunication network, in particular via a satellite network comprising a geostationary satellite, wherein a data processing application, in particular a database application, runs on the server and generates screen displays of an interactive user application with several data fields that are processed one after the other in a processing sequence in line with predetermined parameters based on commands and data entered via an input medium connected to the client computer and are then transferred to the client computer in the form of data packets without acknowledgment of receipt and displayed by this client computer on a display medium, whereby on the display medium a command prompt signalizes that additional data is to be entered in a corresponding data field via the input medium, and then transmitted in the form of additional data packets via the telecommunication network to the server computer, wherein the parameters for the processing sequence of the data fields are transferred via the telecommunication network to the client computer, and an independent program routine runs on the client computer which alters the screen display independently in such a way when entering

specified commands via the input medium based on the parameters for the processing sequence that the input prompt within a data field is moved to the next or previous data field in line with the processing sequence, wherein the server computer is operated using a window-based operating system, whereby the screen displays transmitted to the client computer are generated on the server computer using a window program routine of the operating system on the server computer based on window and object parameters prior to being sent to the client computer, and wherein the window and object parameters include X and Y coordinates of objects being displayed.

24. The method according to claim 23, wherein the independent program routine receives the parameters for the processing sequence of the data fields by accessing the window program routine of the operating system on the server computer.

25. The method according to claim 23, wherein the independent program routine receives a copy or partial copy of the window and object parameters which the window program routine of the operating system on the server computer uses to generate the active screen display.

26. The method according to claim 22, wherein the independent program routine additionally receives the type and/or style and/or size of the font used in a data field alongside the parameters for the processing sequence of the data fields.

27. The method according to claim 23, wherein the independent program routine receives the parameters for the processing sequence of the data fields and/or the window and object parameters from an additional program routine running on the server computer.

28. The method according to claim 23, wherein the independent program routine analyzes the commands and/or data entered via the input medium before sending these to the server computer and independently alters the active screen display based on the processing sequence and the window and object parameters.

29. The method according to claim 28, wherein the independent program routine independently alters the active screen display based on the processing sequence as well as the window and object parameters in such a way that the input prompt is moved to the start of the previous data field when a specified command occurs which is assigned to a

backward jump to a previous data field.

30. The method according to claim 28, wherein the independent program routine independently alters the active screen display based on the processing sequence as well as the window and object parameters in such a way that the input prompt is moved to the start of the next data field when a specified command occurs which is assigned to a forward jump to a previous data field.

31. The method according to claim 22, wherein the independent program routine analyzes the position of a data pointing device assigned to the input medium, in particular a mouse pointer, and independently alters the display of an object contained in the active screen display in a predefined manner when the position of the data pointing device corresponds to a predefined position or a section in the active screen display.

32. The method according to claim 28, wherein the independent program routine independently alters the display of the object contained in the active screen display in the predefined manner when the position of the data pointing device corresponds to a predefined position or a

section in the active screen display and a predefined command is entered essentially simultaneously via the input medium.

33. The method according to claims 32, wherein the object is a button which changes the display types when the user clicks on it with the data pointing device.

34. The method according to claim 32, wherein the object is a scroll bar and when clicked on by the user with the data pointing device, the display of the scroll bar is altered in a predefined manner and at least a part of the content of the active screen display is moved.

35. The method according to claim 22, wherein the screen displays are transmitted at least in part in the form of bitmap files to the client computer.

36. The method according to claim 22, wherein the transfer of the screen displays takes place in line with the remote desktop protocol.

37. The method according to claim 22, wherein the transfer of the additional data packets from the client computer to the server computer

takes place essentially without acknowledgments of receipt of the additional data packets being sent by the server computer.

38. The method according to claim 22, wherein the additional data packets are checked for redundant data, with any such redundant data then being removed or replaced by data already entered, before they are sent to the server computer.

39. The method according to claim 22, wherein the data packets generated by the server computer are checked for redundant data, with any such redundant data then being removed or replaced by data kept by the server computer before they are sent to the client computer.

40. The method according to claim 22, wherein several of the data packets and/or additional data packets to be sent between the server computer and the client computer via the geostationary satellite are grouped together to form larger data packets and/or larger additional data packets.

41. The method according to claim 40, wherein the grouped larger data packets and/or the grouped larger additional data packets have an

optimized size in such a way that their transfer via the geostationary satellite takes place without the data packets and/or additional data packets being fragmented.

42. The method according to claim 41, wherein the optimized size of the larger data packets and/or the larger additional data packets is determined based on the connection-specific parameters by the server computer when setting up the satellite network for the corresponding connection to the client computer.

Evidence Appendix:

No evidence pursuant to §§ 1.130, 1.131, or 1.132 or any other evidence has been entered by the Examiner and relied upon by appellant in the appeal.

Related Proceedings Appendix:

No prior or pending appeals, interferences or judicial proceedings are in existence which may be related to, directly affect or be directly affected by or have a bearing on the Board's decision in this appeal. Accordingly, no copies of decisions rendered by a court or the Board are available.